Final
Site-Specific Field Sampling Plan and Site-Specific Safety and Health Plan Attachments
Site Investigation at Former Trap and Skeet Range
Parcel 127Q
Fort McClellan, Calhoun County, Alabama

Task Order CK10
Contract No. DACA21-96-D-0018
IT Project No. 796887

November 2000

Revision 1

Final
Site-Specific Field Sampling Plan Attachment
Site Investigation at Former Trap and Skeet Range
Parcel 127Q
Fort McClellan, Calhoun County, Alabama

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Executive Summary

In accordance with Contract Number DACA21-96-D-0018, Task Order CK10, IT Corporation will conduct site investigation activities at the Former Trap and Skeet Range, Parcel 127Q, at Fort McClellan, Calhoun County, Alabama, to determine the presence or absence of potential site-specific chemicals at this site. The purpose of this site-specific field sampling plan is to provide technical guidance for sampling activities at the Former Trap and Skeet Range, Parcel 127Q.

The Former Trap and Skeet Range, Parcel 127Q, is a 6.38 acre area located at the eastern end of 5th Street, in the northern portion of Fort McClellan Main Post. This range is clearly visible on aerial photographs taken in March 1973 and was reportedly open for only a relatively short period of time. It is reasonable to assume that range use was limited to shotguns (ESE, 1998).

Specifically, IT Corporation will collect six surface soil samples, six subsurface soil samples, four groundwater samples, and two depositional soil samples at this site. Potential contaminant sources at Former Trap and Skeet Range, Parcel 127Q, are primarily lead and other metals from the firing of field weapons and semivolatile organic compounds from the petroleum-based clay pigeon targets, but may include nitroexplosives. Chemical analyses of the samples collected during the field program will include metals and nitroexplosives. Results from these analyses will be compared with site-specific screening levels developed in the IT Corporation July 2000 *Final Human Health and Ecological Screening Values and PAH Background Summary Report*, and regulatory agency guidelines.

This site-specific field sampling plan attachment to the installation-wide sampling and analysis plan (SAP) for Former Trap and Skeet Range, Parcel 127Q, will be used in conjunction with the site-specific safety and health plan, the installation-wide work plan, and the SAP. The SAP includes the installation-wide safety and health plan, waste management plan, and quality assurance plan. Site-specific hazard analyses are included in the site-specific safety and health plan.

1.0 Project Description

1.1 Introduction

The U.S. Army is conducting studies of the environmental impact of suspected contaminants at Fort McClellan (FTMC) in Calhoun County, Alabama, under the management of the U.S. Army Corps of Engineers (USACE)-Mobile District. At the request of the U.S. Army, IT Corporation (IT) has been requested to conduct fast-track site investigation (SI) activities at Former Trap and Skeet Range, Parcel 127Q, at FTMC, Calhoun County, Alabama, to determine the presence or absence of potential site-specific chemicals at this site for potential quick release of the property by the U.S. Army. The area of this parcel was specified by the FTMC Transition Force. IT will conduct SI activities in accordance with Contract Number DACA21-96-D-0018, Task Order CK10.

This site-specific field sampling plan (SFSP) attachment to the installation-wide sampling and analysis plan (SAP) (IT, 2000a) for FTMC has been prepared to provide technical guidance for sample collection and analysis at Former Trap and Skeet Range, Parcel 127Q. This SFSP will be used in conjunction with the site-specific safety and health plan (SSHP) developed for Former Trap and Skeet Range, Parcel 127Q, and the installation-wide work plan (WP) (IT, 1998) and SAP. The SAP includes the installation-wide safety and health plan, waste management plan, and quality assurance plan (QAP). Site-specific hazard analyses are included in the SSHP.

1.2 Site Description

Former Trap and Skeet Range, Parcel 127Q, is a 6.38 acre area located at the east end of 5th Street, in the northern portion of the FTMC Main Post (Figure 1-1). This range is clearly visible on aerial photographs taken from March 1973 (aerial photo series number 334, frame 69) through 1994. The structures used to house the equipment for throwing skeet are present in each photo from 1973 through 1994. The use of this parcel for all of these years is not documented, and the environmental baseline study by Environmental Sciences and Engineering, Inc. reports the range as operable for only a relatively short period of time, around 1973. There is not any other information regarding the dates of use or ordnance fired at this range is available; however, it is reasonable to assume that range use was limited to shotguns (Environmental Science and Engineering, Inc., 1998). The information gathered to prepare this SI WP for Former Trap and Skeet Range, Parcel 127Q, has been based on a site visit completed by IT personnel in combination with the series of aerial photographs taken from 1973 to 1994.

Former Trap and Skeet Range, Parcel 127Q, was used as a Special Forces airborne training area. Structures currently existing that were used for this type of practice include: Parachute Landing Fall Practice Area, a mock aircraft, grounding anchors, a jump tower and an observation tower (Figure 1-2).

Remnants of the concrete walkways used for trap and skeet practice also currently exist at the site. One small concrete walkway is located at the west end of the parcel, directly east of Building 1345. Two other concrete walkways are located at the southern portion of the parcel. The smaller concrete walkway is believed to have been used for trap shooting, as interpreted from the 1973 aerial photograph. The 1973 photograph depicts a small structure 50 feet in front, northeast, of the walkway. This structure most likely housed the machinery used for launching the target trapshooting practice.

The two walkways at the southern portion of the parcel are much larger than the concrete walkway located at the western portion of the site. This most likely is the location of the majority of activity during the use of the parcel for skeet and trap shooting. Aerial photographs from 1973 through 1994 depict houses used for launching clay pigeons for skeet practice along with at least one concrete walkway. These houses are no longer present.

Former Trap and Skeet Range, Parcel 127Q, is currently located within the property used by the National Guard. Parcel 127Q, Former Trap and Skeet Range, is easily accessed by 5th Street. Two secondary roads also can be used to access the site. One of the secondary roads accesses the site from the north and the other from the south. Both the Observation Tower and Jump Tower are secured by fencing that surrounds the perimeters of each tower.

The overall elevation of Former Trap and Skeet Range, Parcel 127Q, varies from about 765 to about 790 feet mean sea level, with the highest elevation near the northwest corner, at the base of Trench Hill. Shallow groundwater flow probably follows site topography, with movement toward the southwest due to a sharp, topographic incline directly north at Trench Hill. An intermittent stream crosses south of the parcel with a westerly flow direction (Figure 1-2). A surface drainage feature, a culvert, was noticed during the site walkover. The culvert begins shallow at the berm and begins to increase in depth as it approaches the south side of Building 1345, remaining north of 5th Street.

The soils at Former Trap and Skeet Range, Parcel 127Q, fall into Rarden silty clay loam, shallow, 2 to 6 percent slopes, severely eroded (ReB3) (U.S. Department of Agriculture, 1961).

The Rarden series consists of moderately well drained, strongly acidic to very strongly acidic soils. The parent material washed from the adjacent higher lying Montevallo, Lehew, Conasauga and Enders soils. The depth to bedrock at these sites ranges from 1.5 feet to 4 feet. The depth to the water table is likely greater than 20 feet. The typical soil description is 0.7 to 2.5 feet of moderately well drained silt loam to silty clay or clay, developed from interbedded shale; platy sandstone, and limestone; surface of some areas has platy sandstone gravel 3 inches in diameter.

1.3 Scope of Work

The scope of work for activities associated with the site investigation at Former Trap and Skeet Range, Parcel 127Q, as specified in the statement of work (USACE, 1999), includes the following tasks:

X Develop the SFSP attachment.

X Develop the SSHP attachment. Collect six surface soil samples, six subsurface soil samples, two depositional soil samples, and four groundwater samples to determine whether potential site-specific chemicals (PSSC) are present at Former Trap and Skeet Range, Parcel 127Q, and to provide data useful for supporting any future planned corrective measures and closure activities.

- Samples will be analyzed for the parameters listed in Section 4.5.

At completion of the field activities and sample analyses, draft and final reports will be prepared to summarize the results of the activities, and to evaluate the absence or presence of PSSCs at this site, and to recommend further actions, if appropriate. SI summary reports will be prepared in accordance with current U.S. Environmental Protection Agency (EPA) Region IV and the Alabama Department of Environmental Management (ADEM) guidelines.

2.0 Summary of Existing Environmental Studies

An EBS was conducted by ESE to document current environmental conditions of all FTMC property (ESE, 1998). The study was to identify sites that, based on available information, have no history of contamination and comply with U.S. Department of Defense (DOD) guidance for fast-track cleanup at closing installations. The EBS also provides a baseline picture of FTMC properties by identifying and categorizing the properties by seven criteria.

1. Areas where no storage, release, or disposal (including migration) has occurred
2. Areas where only release or disposal of petroleum products has occurred
3. Areas of contamination below action levels
4. Areas where all necessary remedial actions have been taken
5. Areas of known contamination with removal and/or remedial action underway
6. Areas of known contamination where required response actions have not been taken
7. Areas that are not evaluated or require further evaluation.

For non-Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) environmental or safety issues, the parcel label includes the following components: a unique non-CERCLA issue number (the letter "Q" designating the parcel as a Community Environmental Response Facilitation Act (CERFA) Category 1 Qualified Parcel), and the code for the specific non-CERCLA issue(s) present (ESE, 1998). The non-CERCLA issue codes used are:

- A = Asbestos (in buildings)
- L = Lead-based paint (in buildings)
- P = Polychlorinated biphenyls (PCB)
- R = Radon (in buildings)
- RD = Radionuclides/radiological issues
- X = Unexploded ordnance
- CWM = Chemical warfare material.

The EBS was conducted in accordance with the CERFA (CERFA-Public Law 102-426) protocols and DOD policy regarding contamination assessment. Record searches and reviews were performed on all reasonably available documents from FTMC, ADEM, EPA Region IV, and Calhoun County, as well as a database search of CERCLA-regulated substances, petroleum products, and Resource Conservation and Recovery Act-regulated facilities. Available historic maps and aerial photographs were reviewed to document historic land uses. Personal and telephone interviews of past and present FTMC employees and military personnel were

conducted. In addition, visual site inspections were conducted to verify conditions of specific property parcels.

Former Trap and Skeet Range, Parcel 127Q, is a qualified parcel identified as a Category 1 CERFA site. This CERFA site is a parcel where no known or recorded storage, release, or disposal (including migration) has occurred on site property. Former Trap and Skeet Range, Parcel 127Q, requires additional evaluation to determine its environmental condition.

3.0 Site-Specific Data Quality Objectives

3.1 Overview

The data quality objective (DQO) process is followed to establish data requirements. This process ensures that the proper quantity and quality of data are generated to support the decision-making process associated with the action selection for Former Trap and Skeet Range, Parcel 127Q. This section incorporates the components of the DQO process described in the publication EPA 540-R-93-071, *Data Quality Objectives Process for Superfund* (EPA, 1993). The DQO process as applied to Former Trap and Skeet Range, Parcel 127Q, is described in more detail in Section 4.3 of the WP. Table 3-1 provides a summary of the factors used to determine the appropriate quantity of samples, and the procedures necessary to meet the objectives of the SI and establish a basis for future action at this site.

The samples will be analyzed using EPA SW-846 methods, including Update III Methods where applicable, as presented in Chapter 4.0 in this SSFP and Table 6-1 in the QAP. Data will be reported and evaluated in accordance with USACE South Atlantic Savannah Level B criteria (USACE, 1994) and the stipulated requirements for the generation of definitive data (Section 3.1.2 of the QAP). Chemical data will be reported via hard copy data packages along with electronic copies by the laboratory using Contract Laboratory Program-like forms. These packages will be validated in accordance with EPA National Functional Guidelines by Level III criteria.

3.2 Data Users and Available Data

The available data, presented in Table 3-1, related to the SI at Former Trap and Skeet Range, Parcel 127Q, have been used to formulate a site-specific conceptual model. This conceptual model was developed to support the development of this SFSP, which is necessary to meet the objectives of these activities and to establish a basis for future action at the site. The data users for the data and information generated during field activities are primarily EPA, USACE, ADEM, and FTMC supporting contractors. This SFSP, along with the necessary companion documents, has been designed to provide the regulatory agencies with sufficient detail to reach a determination as to the adequacy of the scope of work. The program has also been designed to provide the level of defensible data and information required to confirm or rule out the existence of residual chemical contamination in site media.

3.3 Conceptual Site Model

The conceptual site exposure model (CSEM) provides the basis for identifying and evaluating potential risks to human health in the risk assessment. The CSEM includes receptors and potential exposure pathways appropriate to all plausible scenarios. The CSEM facilitates consistent and comprehensive evaluation of risk to human health through graphically presenting all possible exposure pathways, including sources, release and transport pathways, and exposure routes. In addition, the CSEM helps to ensure that potential pathways are not overlooked. The elements of a complete exposure pathway and CSEM are:

- Source (i.e., contaminated environmental) media
- Contaminant release mechanisms
- Contaminant transport pathways
- Receptors
- Exposure pathways.

Contaminant release mechanisms and transport pathways are not relevant for direct receptor contact with a contaminated source medium.

The site was formerly used as a target practice area for shooting skeet. Therefore, primary contaminant releases were probably limited to lead or other constituents that entered surface and possibly subsurface soil via bullets, shells, etc., and semivolatile constituents from the petroleum-based clay pigeons. Natural weathering of the spent ammunition could lead to other potential contaminant transport pathways including leaching to subsurface soil and groundwater, dust emissions to ambient air, and biotransfer to deer through browsing.

Conditions on the site at the present time and conditions expected to occur in the future dictate the selection of receptors used to model current and future risks at the site. Current land use at Parcel 127Q includes training exercises conducted by the National Guard. National Guard periodically maintain the grounds of this area. There are no construction projects currently ongoing, nor are any areas used for residential purposes. Although access to FTMC is limited, it is possible that an individual could circumvent the perimeter fence on the Base and wander into the area. Based on these conditions, the groundskeeper and recreational site user are the only receptors evaluated under the current scenario. The fish and venison pathways will not be evaluated for the recreational site user under the current scenario because the intermittent stream to the south of the site is too small to support fish, and hunting is not feasible due to the restricted nature of the site. The following receptors were considered for this site, but are not included under the current land-use scenario:

- ***Construction Worker.*** No development or construction is occurring at the site.

- ***Resident.*** The site is not currently used for residential purposes.

The site is expected to remain under the stewardship of the National Guard in the future. Although the land use of the site is not expected to change, the National Guard may eventually choose to develop some areas of this site. Human receptors addressed in the future scenario of the CSEM include:

- ***Resident.*** Although the site is expected to be utilized by the National Guard for training purposes, the resident is considered to provide information for the project manager and regulators.
- ***Groundskeeper.*** The site is likely to have areas that will need to be maintained, such as around parking lots and buildings.
- ***Construction Worker.*** Construction or demolition projects, or utility line maintenance may occur in the future.
- ***Recreational Site User.*** The recreational site user is included as a trespasser and/or sportsman. Hunting will be included as a potential exposure pathway for the future recreational site user because the site is wooded, and future land-use may be altered to allow hunting.

A summary of relevant contaminant release and transport mechanisms, source and exposure media, and receptors and exposure pathways for this site is provided in Table 3-1 and Figure 3-1.

3.4 Decision-Making Process, Data Uses, and Needs

The decision-making process consists of a seven-step process that is presented in detail in Section 4.3 of the WP and will be followed during the site investigation at Former Trap and Skeet Range, Parcel 127Q. Data uses and needs are summarized in Table 3-1.

3.4.1 Risk Evaluation

Confirmation of contamination at Former Trap and Skeet Range, Parcel 127Q, will be based on using EPA definitive data with USACE South Atlantic Savannah Level B data packages to determine whether or not PSSCs are detected in site media. Detected site chemical concentrations will be compared to site-specific screening levels developed in the July 2000 *Final Human Health and Ecological Screening Values and PAH Background Summary Report* (IT, 2000b). Definitive data will be adequate for confirming the presence of site contamination and for supporting a feasibility study and risk assessment.

Assessment of potential ecological risk associated with sites or parcels (e.g., surface water and sediment sampling, specific ecological assessment methods, etc.) will be addressed in accordance with the procedures in the WP.

3.4.2 Data Types and Quality

Surface soil, subsurface soil, depositional soil, and groundwater samples will be sampled and analyzed to meet the objectives of the SI at Former Trap and Skeet Range, Parcel 127Q. Quality assurance/quality control (QA/QC) samples will be collected for all sample types as described in Chapter 4.0 of this SFSP. The samples will be analyzed by EPA-approved SW-846 methods, where available; comply with EPA definitive data requirements; and be reported using hard copy along with electronic data packages. In addition to meeting the quality needs of this SI, data analyzed at this level of quality are appropriate for all phases of site characterization, remedial investigation, and risk assessment.

3.4.3 Precision, Accuracy, and Completeness

Laboratory requirements of precision, accuracy, and completeness for this SI are provided in Section 9.0 of the QAP.

4.0 Field Activities

4.1 Utility Clearances

Prior to performing any intrusive sampling, a utility clearance will be performed at locations where intrusive activities will occur, using the procedure outlined in Section 4.2.6 of the SAP (IT, 2000a). The site manager will mark the proposed locations with stakes, coordinate with the appropriate local utility companies to clear the proposed locations for utilities, and obtain digging permits. Once the locations are approved for intrusive activities, the stakes will be labeled as cleared.

4.2 Environmental Sampling

The environmental sampling program at Former Trap and Skeet Range, Parcel 127Q, includes the collection of surface soil, subsurface soil, groundwater, and depositional samples for chemical analyses. These samples will be collected and analyzed to provide data for characterizing the site to determine the environmental condition of the site and any further action to be conducted at the site.

4.2.1 Surface Soil Sampling

Surface soil samples will be collected from six locations at Former Trap and Skeet Range, Parcel 127Q.

4.2.1.1 Sample Locations and Rationale

The surface soil sampling rationale are listed in Table 4-1. Proposed sampling locations are shown in Figure 4-1. Surface soil sample designations and required QA/QC sample requirements are summarized in Table 4-2. The final soil boring sampling locations will be determined in the field by the on-site geologist, based on actual field conditions.

4.2.1.2 Sample Collection

Surface soil samples will be collected from the upper 1 foot of soil by direct-push methodology as specified in Section 4.7.1.1 of the SAP (IT, 2000a). Collected soil samples will be screened using a photoionization detector (PID) in accordance with Section 4.15 of the SAP. Surface soil samples will be screening for information purposes only, and not to select samples for analysis. Sample containers, sample volumes, preservatives, and holding times for the analyses required in this SFSP are listed in Section 5.0, Table 5-1, of the QAP. Sample documentation and chain-of-

custodies (COC) will be recorded as specified in Section 4.13 of the SAP. The samples will be analyzed for the parameters listed in Section 4.5 of this SFSP.

4.2.2 Subsurface Soil Sampling

Six subsurface soil samples will be collected in conjunction with the surface soil samples at Former Trap and Skeet Range, Parcel 127Q.

4.2.2.1 Sample Locations and Rationale

Subsurface soil samples will be collected from the soil borings proposed on Figure 4-1. The subsurface soil sampling rationale is listed in Table 4-1. Subsurface soil samples to be collected are listed in Table 4-2. The final soil boring sampling locations will be determined in the field by the on-site geologist, based on actual field observations and utility clearance results.

4.2.2.2 Sample Collection

Subsurface soil samples will be collected from soil borings at a depth greater than 1 foot below ground surface in the unsaturated zone. The soil borings will be advanced and soil samples collected using the direct-push sampling procedures specified in Section 4.7.1.1 of the SAP (IT, 2000a).

Soil samples will be collected continuously for the first 12 feet or until either groundwater or refusal is reached. A detailed lithogical log will be recorded by the on-site geologist for each borehole. At least one subsurface sample from each borehole will be selected for analyses. The collected subsurface soil samples will be field-screened using a PID in accordance with Section 4.15 of the SAP. Subsurface soil samples will be screened for information purposes only, and not to select samples for analyses. The on-site geologist will look for lead shot in each sample interval, staining, or other notable visual characteristic, or rely on olfactory senses to determine the depth to collect for a subsurface soil sample for laboratory analyses. A sample will be collected from the deepest interval and submitted to the laboratory for analyses if none of the soils exhibit non-native visual or olfactory characteristics. Subsurface soil samples will be selected for analyses from any depth interval if the on-site geologist suspects PSSCs at the interval. Site conditions such as lithology may also determine the actual sample depth interval submitted for analyses. More than one subsurface soil sample will be collected if field measurements and observations indicate a possible layer of PSSCs and/or additional sample data would provide insight to the existence of any PSSCs.

Sample documentation and COC will be recorded as specified in Section 4.13 of the SAP. Sample containers, sample volumes, preservatives, and holding times for the analyses required in this SFSP are listed in Section 5.0, Table 5-1 of the QAP. The samples will be analyzed for the parameters listed in Section 4.5 of this SFSP.

4.2.3 Permanent Residuum Monitoring Wells

Four permanent residuum monitoring wells will be installed at the Former Trap and Skeet Range, Parcel 127Q. The permanent residuum monitoring well locations are shown on Figure 4-1. The rationale for the monitoring well locations are presented in Table 4-1. The monitoring well boreholes will be drilled to the top of bedrock using a truck-mounted hollow-stem auger drill rig. The monitoring well casing will consist of new 2-inch inside diameter, Schedule 40, threaded, flush-joint, polyvinyl chloride pipe. Attached to the bottom of the well casing will be a section of new threaded, flush-joint, 0.010-inch continuous wrap polyvinyl chloride well screen, approximately 10 to 20 feet long. The well will be installed so the well screen straddles the water table.

Soil samples for lithology will be collected continuously every 5 feet to the total depth of the hole during hollow-stem auger drilling to provide a detailed lithologic log. The samples will be collected for lithology using a 24-inch-long, 2-inch-or-larger-diameter, split-spoon sampler. The soil borings will be logged in accordance with American Standard for Testing and Materials Method D 2488 using the Unified Soil Classification System. The soil samples will be screened in the field using a PID. The monitoring wells will be drilled, installed, and developed as specified in Section 4.8 and Appendix C of the SAP (IT, 2000a). The exact monitoring well locations will be determined in the field by the on-site geologist, based on actual field conditions.

4.2.4 Groundwater Sampling

Groundwater samples will be collected from the four monitoring wells completed at the Former Trap and Skeet Range, Parcel 127Q, as described in Section 4.2.3.

4.2.4.1 Sample Locations and Rationale

Groundwater samples will be collected from the monitoring well locations shown on Figure 4-1. The groundwater sampling rationale is listed in Table 4-1. The groundwater sample designations, depths, and required QA/QC sample quantities are listed in Table 4-3.

4.2.4.2 Sample Collection

The depositional soil sample collection will be conducted in accordance with the procedures for surface soil sample collection specified in Section 4.9.1.1 of the SAP. Sample documentation and COC will be recorded as specified in Section 4.13 of the SAP. Sample containers, sample volumes, preservatives, and holding times for the analyses required in the SFSP are listed in Section 5.0, Table 5-1 of the QAP. The samples will be analyzed for the parameters listed in Section 4.5 of this SFSP.

Sample documentation and COC will be recorded as specified in Section 4.13 of the SAP. Sample containers, sample volumes, preservatives, and holding times for the analyses required in this SFSP are listed in Section 5.0, Table 5-1 of the QAP. The samples will be analyzed for the parameters listed in Section 4.5 of this SFSP.

4.2.5 Depositional Sampling

Two depositional samples will be collected from Former Trap and Skeet Range, Parcel 127Q.

4.2.5.1 Sample Locations and Rationale

The proposed locations for the depositional samples are shown in Figure 4-1. Depositional sampling rationale is presented in Table 4-1. The depositional sample designation and required QA/QC sample requirements are listed in Table 4-2. The actual depositional sample points will be at the discretion of the ecological sampler, based on the drainage pathways and actual field observations.

4.2.5.2 Sample Collection

The depositional soil sample collection will be conducted in accordance with the procedures for surface soil sample collection specified in Section 4.9.1.1 of the SAP. Sample documentation and COC will be recorded as specified in Section 4.13 of the SAP. Sample containers, sample volumes, preservatives and holding times for the analyses required in this SFSP are listed in Section 5.0, Table 5-1 of the QAP. The samples will be analyzed for the parameters listed in Section 4.5 of this SFSP.

4.3 Decontamination Requirements

Decontamination will be performed on sampling and nonsampling equipment to prevent cross-contamination between sampling locations. Decontamination of sampling equipment will be performed in accordance with the requirements presented in Section 4.10.1.1 of the SAP (IT,

2000a). Decontamination of nonsampling equipment will be performed in accordance with the requirements presented in Section 4.10.1.2 of the SAP.

4.4 Surveying of Sample Locations

Sampling locations will be marked with pin flags, stakes, and/or flagging and will be surveyed using either global positioning system (GPS) or conventional civil survey techniques, as necessary to obtain the required level of accuracy. Horizontal coordinates will be referenced to the U.S. State Plane Coordinate System, Alabama East Zone, North American Datum, 1983. Elevations will be referenced to the National Geodetic Vertical Datum of 1929 or the North American Vertical Datum of 1988 (soon to be established on site).

Horizontal coordinates for soil and depositional soil locations will be recorded using a GPS to provide accuracy within 1 meter. Procedures to be used for GPS surveying are described in Section 4.3 of the SAP. Conventional land survey requirements are presented in Section 4.19 of the SAP.

4.5 Analytical Program

Samples collected at locations specified in this chapter of this SFSP will be analyzed for the specific suites of chemicals and elements based the history of site usage, as well as EPA, ADEM, FTMC, and USACE requirements. Target analyses for samples collected from Former Trap and Skeet Range, Parcel 127Q, consist of the following list of analytical suites:

- Target compound list semivolatile organic compounds – Method 8270C
- Target analyte list metals - Method 6010B/7000
- Nitroexplosives - Method 8330.

The samples will be analyzed using EPA SW-846 methods, including Update III Methods where applicable, as presented in Table 4-4 in this SFSP and Table 6-1 in the QAP. Data will be reported and evaluated in accordance with USACE South Atlantic Savannah Level B criteria (USACE, 1994) and the stipulated requirements for the generation of definitive data (Section 3.1.2 of the QAP). Chemical data will be reported via hard copy data packages along with electronic copies by the laboratory using CLP-like forms. These packages will be validated in accordance with EPA National Functional Guidelines by Level III criteria.

4.6 Sample Preservation, Packaging, and Shipping

Sample preservation, packaging, and shipping will follow the procedures specified in Section 4.13.2 of the SAP (IT, 2000a). Completed analysis request/COC records will be secured and included with each shipment of coolers to:

Attn: Elizabeth McIntyre
EMAX Laboratories, Inc.
630 Maple Avenue
Torrance, California 90503
Telephone: (310) 618-8889.

QA split samples collected for the USACE laboratory will be shipped to the following address:

U.S. Army Engineer District, Savannah
Environmental & Materials Unit
Attn: Sample Receiving
200 North Cobb Parkway
Building 400, Suite 404
Marietta, Georgia 30062
Telephone: (678) 354-0310.

4.7 Investigation-Derived Waste Management

Management and disposal of the investigation-derived wastes (IDW) will follow procedures and requirements as described in Appendix D of the SAP (IT, 2000a). The IDW generated at Former Trap and Skeet Range, Parcel 127Q, site is expected to include decontamination fluids, soil cuttings from well installation activities, and disposable personal protective equipment. The IDW will be staged in the fenced area surrounding Buildings 335 and 336 while awaiting final disposal.

4.8 Site-Specific Safety and Health

Health and safety requirements for this SI are provided in the SSHP attachment for Former Trap and Skeet Range, Parcel 127Q. The SSHP attachment will be used in conjunction with the installation-wide safety and health plan.

5.0 Project Organization and Schedule

The project schedule for the SI activities will be provided by the IT project manager to the Base Realignment and Closure Cleanup Team and will be in accordance with the WP.

6.0 References

Environmental Science and Engineering, Inc., 1998, ***Final Environmental Baseline Survey, Fort McClellan, Alabama***, prepared for U.S. Army Environmental Center, Aberdeen Proving Ground, Maryland, January.

IT Corporation (IT), 2000a, ***Final Installation-Wide Sampling and Analysis Plan, Fort McClellan, Calhoun County, Alabama***, March.

IT Corporation (IT), 2000b, ***Final Human Health and Ecological Screening Values and PAH Background Summary Report, Fort McClellan, Calhoun County, Alabama***, July.

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U.S. Department of Agriculture, 1961, ***Soil Survey, Calhoun County, Alabama***, Soil Conservation Service, Series 1958, No. 9, September.

U.S. Environmental Protection Agency (EPA), 1993, ***Data Quality Objectives Process for Superfund, Interim Final Guidance***, EPA 540-R-93-071, September.